CLAIMS

1. A substantially purified peptide which comprises a sequence selected from the group consisting of:

i) an amino acid sequence as provided in SEQ ID NO:4,

ii) an amino acid sequence which is at least 60% identical to SEQ ID NO:4,

iii) an amino acid sequence as provided in SEQ ID NO:5,

iv) an amino acid sequence which is at least 80% identical to SEQ ID NO:5,

v) an amino acid sequence as provided in SEQ ID NO:48,

vi) an amino acid sequence which is at least 70% identical to SEQ ID NO:48,

vii) an amino acid sequence as provided in SEQ ID NO:53,

viii) an amino acid sequence which is at least 70% identical to SEQ ID NO:53,

ix) a biologically active fragment of any one of i) to viii), and

x) a precursor comprising the amino acid sequence according to any one of i) to ix),

wherein the peptide, or fragment thereof, exhibits antifungal and/or antibacterial activity.

2. The peptide of claim 1 which can be purified from an insect.

3. The peptide of claim 1 or claim 2 which can be purified from a lepidopteran insect of the family Pyralidae.

4. The peptide according to any one of claims 1 to 3, wherein the peptide exhibits antifungal activity against a fungus selected from the group consisting of: *Fusarium graminearum*, *Fusarium oxysporum*, *Ascochyta rabiei*, *Candida albicans*, *C. parapsilosis*, *C. glabrata*, *C. krusei*, *C. tropicalis*, *Cryptococcus neoformans* and *Leptosphaeria maculans*.

5. The peptide according to any one of claims 1 to 4 which is fused to at least one other polypeptide/peptide sequence.

6. An isolated polynucleotide, the polynucleotide comprising a sequence selected from the group consisting of:

i) a sequence of nucleotides provided in SEQ ID NO:9 or SEQ ID NO:10;

ii) a sequence of nucleotides provided in SEQ ID NO:11;

iii) a sequence of nucleotides provided in SEQ ID NO:12;

iv) a sequence of nucleotides provided in SEQ ID NO:13;

v) a sequence of nucleotides provided in SEQ ID NO:50;

vi) a sequence of nucleotides provided in SEQ ID NO:51;

vii) a sequence of nucleotides provided in SEQ ID NO:55;

viii) a sequence of nucleotides provided in SEQ ID NO:56;

ix) a sequence encoding a peptide according to any one of claims 1 to 5;

x) a sequence of nucleotides which is at least 66% identical to SEQ ID NO:9, SEQ ID NO:10, or SEQ ID NO:12;

xi) a sequence of nucleotides which is at least 71% identical to SEQ ID NO:11 or SEQ ID NO:13;

xii) a sequence of nucleotides which is at least 62% identical to SEQ ID NO:50, or SEQ ID NO:51;

xiii) a sequence of nucleotides which is at least 62% identical to SEQ ID NO:55, or SEQ ID NO:56; and

xiv) a sequence which hybridizes to any one of (i) to (viii) under high stringency conditions.

7. The polynucleotide of claim 6, wherein the polynucleotide encodes a peptide with antifungal and/or antibacterial activity.

8. A vector comprising the polynucleotide of claim 6 or claim 7.

9. A host cell comprising the polynucleotide of claim 6 or claim 7, or the vector of claim 8.

10. The host cell of claim 9 which is a plant cell.

11. A process for preparing a peptide according to any one of claims 1 to 5, the process comprising cultivating a host cell according to claim 9 or claim 10 under conditions which allow expression of the polynucleotide encoding the peptide, and recovering the expressed peptide.

12. A composition comprising a peptide according to any one of claims 1 to 5, and one or more acceptable carriers.

13. A composition comprising a polynucleotide according to claim 6 or claim 7, and one or more acceptable carriers.

14. A method for killing, or inhibiting the growth and/or reproduction of a fungus and/or a bacteria, the method comprising exposing the fungus and/or bacteria to a peptide according to any one of claims 1 to 5.

15. A transgenic plant, the plant having been transformed with a polynucleotide according to claim 6 or claim 7, wherein the plant produces a peptide according to any one of claims 1 to 5.

16. A method of controlling fungal and/or bacterial infections of a crop, the method comprising cultivating a crop of transgenic plants of claim 15.

17. A transgenic non-human animal, the animal having been transformed with a polynucleotide according to claim 6 or claim 7, wherein the animal produces a peptide according to any one of claims 1 to 5.

18. A method of treating or preventing a fungal and/or bacterial infection in a patient, the method comprising administering to the patient a peptide according to any one of claims 1 to 5.

19. Use of a peptide according to any one of claims 1 to 5 for the manufacture of a medicament for treating or preventing a fungal and/or bacterial infection in a patient.

20. An antibody which specifically binds a peptide according to any one of claims 1 to 5.

21. A method for killing, or inhibiting the growth and/or reproduction of a fungus, the method comprising exposing the fungus to a peptide which comprises a sequence selected from the group consisting of:

i) an amino acid sequence comprising residues 25 to 67 of SEQ ID NO:14,

ii) an amino acid sequence as provided in SEQ ID NO:17,

iii) an amino acid sequence comprising residues 26 to 67 of SEQ ID NO:15,

iv) an amino acid sequence which is at least 75% identical to any one of i) to iii),

v) an amino acid sequence comprising residues 26 to 66 of SEQ ID NO:18,
vi) an amino acid sequence which is at least 50% identical to v), and
vii) a biologically active fragment of any one of i) to vi).

22. The method of claim 21, wherein the peptide comprises a sequence selected from the group consisting of:
i) an amino acid sequence comprising residues 26 to 66 of SEQ ID NO:18,
ii) an amino acid sequence which is at least 50% identical to i), and
iii) a biologically active fragment of i) or ii).

23. A method of controlling fungal infections of a crop, the method comprising cultivating a crop of transgenic plants which produce a peptide which comprises a sequence selected from the group consisting of:
i) an amino acid sequence comprising residues 25 to 67 of SEQ ID NO:14,
ii) an amino acid sequence comprising residues 25 to 66 of SEQ ID NO:16,
iii) an amino acid sequence as provided in SEQ ID NO:17,
iv) an amino acid sequence comprising residues 26 to 67 of SEQ ID NO:15,
v) an amino acid sequence which is at least 75% identical to any one of i) to iv),
vi) an amino acid sequence comprising residues 26 to 66 of SEQ ID NO:18,
vii) an amino acid sequence which is at least 50% identical to vi), and
viii) a biologically active fragment of any one of i) to vii).

24. The method of claim 23, wherein the peptide comprises a sequence selected from the group consisting of:
i) an amino acid sequence comprising residues 26 to 66 of SEQ ID NO:18,
ii) an amino acid sequence which is at least 50% identical to i), and
iii) a biologically active fragment of i) or ii).

25. A method of treating or preventing a fungal infection in a patient, the method comprising administering to the patient a peptide which comprises a sequence selected from the group consisting of:
i) an amino acid sequence comprising residues 25 to 67 of SEQ ID NO:14,
ii) an amino acid sequence as provided in SEQ ID NO:17,
iii) an amino acid sequence comprising residues 26 to 67 of SEQ ID NO:15,
iv) an amino acid sequence which is at least 75% identical to any one of i) to iii),

v) an amino acid sequence comprising residues 26 to 66 of SEQ ID NO:18,
vi) an amino acid sequence which is at least 50% identical to v), and
vii) a biologically active fragment of any one of i) to vi).

26. Use of a peptide which comprises a sequence selected from the group consisting of:

i) an amino acid sequence comprising residues 25 to 67 of SEQ ID NO:14,
ii) an amino acid sequence as provided in SEQ ID NO:17,
iii) an amino acid sequence comprising residues 26 to 67 of SEQ ID NO:15,
iv) an amino acid sequence which is at least 75% identical to any one of i) to iii),
v) an amino acid sequence comprising residues 26 to 66 of SEQ ID NO:18,
vi) an amino acid sequence which is at least 50% identical to v), and
vii) a biologically active fragment of any one of i) to vi)

for the manufacture of a medicament for treating or preventing a fungal infection in a patient.

27. A kit comprising a peptide according to any one of claims 1 to 5.